



## SEQUENCE LISTING

<110> The Rockefeller University  
Friedman, Jeffrey M.  
Lee, Gwo-Hwa  
Proenca, Ricardo

<120> DB, THE RECEPTOR FOR LEPTIN , NUCLEIC ACIDS ENCODING THE RECEPTOR, AND  
USES THEREOF

<130> 600-1-162

<140> 08/586,594

<141> 1996-01-16

<160> 91

<170> PatentIn version 3.1

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C3



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Tyr Ile Ser Thr Leu Ser Leu Phe Pro Ser Ala Leu Ala Leu Asp Trp  
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Ala Val Pro Gly Leu Val Leu Leu Phe Pro Gly Gly Asn Val Glu Leu  
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His Glu Phe Trp Tyr Lys His Cys Gly Leu Cys Ala Asn Ile Xaa Cys  
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Phe Leu Gln Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg  
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Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
100 105 110

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
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Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn  
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Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp  
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Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser  
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Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys  
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Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro  
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Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn  
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Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val  
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C3

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Val Pro Ala Ala Met Val Ser Leu Leu Leu Thr Thr Pro Asp Pro Glu  
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Gly Ser Gln Ser Thr Gln Val Cys Glu Asp Glu Cys Gln Arg Gln Pro  
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Leu Gly Val Thr Ser Val Asn Arg Arg Glu Ser Gly Val Leu Leu Thr  
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C3

Gly Glu Ala Gly Ile Leu Cys Thr Phe Pro Ala Gln Cys Leu Phe Ser  
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Asp Ile Arg Ile Leu Gln Glu Arg Cys Ser His Phe Val Glu Asn Asn  
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Asn Val Xaa Xaa Glu Leu His Glu Phe Trp Tyr Lys His Cys Gly Leu  
65 70 75 80

Cys Ala Asn Xaa Ile Xaa Cys Phe Leu Gln Pro Leu Thr Lys Asn Asp  
85 90 95

Ser Leu Cys Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His  
100 105 110

Asn Gly Thr Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe  
115 120 125

Leu Trp Thr Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser  
130 135 140

Leu Gly Ala Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met  
145 150 155 160

Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser  
165 170 175

Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu  
180 185 190

Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met  
195 200 205

Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp  
210 215 220

Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe  
225 230 235 240

Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp  
245 250 255

Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro  
260 265 270

Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser  
275 280 285

His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys  
290 295 300

Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Val Thr Val  
305 310 315

<210> 7  
<211> 2703  
<212> DNA  
<213> Mus musculus

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gagttatcca aaacagtctt ccaactgttg tttgggaatg agcaagggtca aaactgctct 300  
gcactcacag acaacactga agggaagaca ctggcttcag tagtgaaggc ttcagttttt 360  
cgccagctag gtgtaaactg ggacatagag tgctggatga aaggggactt gacattattc 420  
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ggtttgcata tgggaagtcac agatgatggg aatttaaaga tttcttgga cagccaaaca 780  
atggcaccat ttccgcttca atatcagggtg aatatattag agaattctac aattgtaaga 840  
gaggctgctg aaattgtctc agctacatct ctgctggtag acagtgtgct tcctggatct 900

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agtggttgat	cgaatgcttc	ttttcattgc	atctacaaaa	acgaaaacca	gattatctcc	1080
tcaaaacaga	tagtttggtg	gaggaatcta	gctgagaaaa	tccctgagat	acagtacagc	1140
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tctgagccca	aaaactgcgt	cttacagaga	gacggctttt	atgaatgtgt	tttccagcca	1500
atctttctat	tatctggcta	tacaatgtgg	atcaggatca	accattcttt	aggttcactt	1560
gactcgccac	caacgtgtgt	ccttcctgac	tccgtagtaa	aaccactacc	tccatctaac	1620
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tag						2703

C3



<210> 8  
<211> 900  
<212> PRT  
<213> Mus musculus

<400> 8

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
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Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
20 25 30

Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
35 40 45

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
65 70 75 80

C3 Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
85 90 95

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
195 200 205

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
245 250 255

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
290 295 300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr

C3

450

455

460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
580 585 590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
610 615 620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
690 695 700

C3

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile  
785 790 795 800

Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly  
805 810 815

Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp  
820 825 830

Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile  
835 840 845

Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg  
850 855 860

Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser  
865 870 875 880

Trp Ala Gln Gly Leu Asn Phe Gln Lys Asp Ile Ser Leu His Glu Val  
885 890 895

Phe Ile Phe Arg  
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C3

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 <212> PRT  
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 <400> 10

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
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Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
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Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
 35 40 45

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
 50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
 65 70 75 80

Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
 85 90 95

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
 100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
 115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
195 200 205

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
245 250 255

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
290 295 300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

C3

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
450 455 460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
580 585 590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser

C3



610

615

620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
690 695 700

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Gly Met Cys Thr  
785 790 795 800

Val Leu Phe Met Asp  
805

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<211> 8

<212> PRT

<213> Mus musculus

<400> 11

Asn Phe Gln Lys Arg Thr Asp Leu  
1 5

C3

<210> 12  
<211> 276  
<212> PRT  
<213> Mus musculus

<400> 12

Asn Phe Gln Lys Pro Glu Thr Phe Glu His Leu Phe Thr Lys His Ala  
1 5 10 15

Glu Ser Val Ile Phe Gly Pro Leu Leu Leu Glu Pro Glu Pro Ile Ser  
20 25 30

Glu Glu Ile Ser Val Asp Thr Ala Trp Lys Asn Lys Asp Glu Met Val  
35 40 45

Pro Ala Ala Met Val Ser Leu Leu Leu Thr Thr Pro Asp Pro Glu Ser  
50 55 60

Ser Ser Ile Cys Ile Ser Asp Gln Cys Asn Ser Ala Asn Phe Ser Gly  
65 70 75 80

Ser Gln Ser Thr Gln Val Cys Glu Asp Glu Cys Gln Arg Gln Pro Ser  
85 90 95

Val Lys Tyr Ala Thr Leu Val Ser Asn Asp Lys Leu Val Glu Thr Asp  
100 105 110

Glu Glu Gln Gly Phe Ile His Ser Pro Val Ser Asn Cys Ile Ser Ser  
115 120 125

Asn His Ser Pro Leu Arg Gln Ser Phe Ser Ser Ser Ser Trp Glu Thr  
130 135 140

Glu Ala Gln Thr Phe Phe Leu Leu Ser Asp Gln Gln Pro Thr Met Ile  
145 150 155 160

Ser Pro Gln Leu Ser Phe Ser Gly Leu Asp Glu Leu Leu Glu Leu Glu  
165 170 175

Gly Ser Phe Pro Glu Glu Asn His Arg Glu Lys Ser Val Cys Tyr Leu  
180 185 190

Gly Val Thr Ser Val Asn Arg Arg Glu Ser Gly Val Leu Leu Thr Gly  
195 200 205

Glu Ala Gly Ile Leu Cys Thr Phe Pro Ala Gln Cys Leu Phe Ser Asp

C3

210 215 220

Ile Arg Ile Leu Gln Glu Arg Cys Ser His Phe Val Glu Asn Asn Leu  
 225 230 235 240

Ser Leu Gly Thr Ser Gly Glu Asn Phe Val Pro Tyr Met Pro Gln Phe  
 245 250 255

Gln Thr Cys Ser Thr His Ser His Lys Ile Met Glu Asn Lys Met Cys  
 260 265 270

Asp Leu Thr Val  
 275

<210> 13  
 <211> 7  
 <212> PRT  
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<400> 13

Asn Phe Gln Lys Val Thr Val  
 1 5

<210> 14  
 <211> 15  
 <212> PRT  
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<400> 14

Asn Phe Gln Lys Asp Ile Ser Leu His Glu Val Phe Ile Phe Arg  
 1 5 10 15

<210> 15  
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 <212> PRT  
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<400> 15

Phe Tyr Ile His Gly Met Cys Thr Val Leu Phe Met Asp  
 1 5 10

<210> 16  
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 <212> PRT  
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<400> 16

Pro Gln Lys Arg Thr Asp Thr Leu  
 1 5

<210> 17  
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<400> 17

Pro Gln Lys Pro Glu Thr  
1 5

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12

<210> 19  
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<400> 19  
gatggaggta aa

12

C3  
<210> 20  
<211> 20  
<212> DNA  
<213> Mus musculus

<400> 20  
atcttgggtt ctctgaagaa

20

<210> 21  
<211> 21  
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<400> 21  
gagattgtca gtcacagcct c

21

<210> 22  
<211> 23  
<212> DNA  
<213> Mus musculus

<400> 22  
atctgaattg gaatcaaata cac

23

<210> 23  
<211> 22  
<212> DNA

<213>	Mus musculus	
<400>	23	
	aaatctgtta tccttctgaa ac	22
<210>	24	
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	acactgttaa tttcacacca gag	23
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	agtcattcaa accattagtt tagg	24
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	tggataaacc cttgctcttc a	21
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	tgaacacaac aacataaagc cc	22
<210>	28	
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<212>	DNA	
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<400>	28	
	aggctccctc agggccac	18
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	gtgactgaat gaagatgtaa tatac	25
<210>	30	

C3

<211> 23  
<212> DNA  
<213> Mus musculus

<400> 30  
tggtatatct ggttattgaa tgg

23

<210> 31  
<211> 27  
<212> DNA  
<213> Mus musculus

<400> 31  
cattaaatga tttattatca gaattgc

27

<210> 32  
<211> 14  
<212> PRT  
<213> Mus musculus

<400> 32

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys  
1 5 10

<210> 33  
<211> 20  
<212> PRT  
<213> Mus musculus

<400> 33

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
1 5 10 15

Ser Glu Pro Lys  
20

<210> 34  
<211> 19  
<212> PRT  
<213> Mus musculus

<400> 34

Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn  
1 5 10 15

Cys Ser Trp

<210> 35  
<211> 166  
<212> DNA

C3

<213> Mus musculus

<220>

<221> misc\_feature

<222> (5)..(5)

<223> N can be A, C, T or G

<400> 35

agggnaagcg ccgaggggaat tgacagccag aactgtaaca gtgtgcgctg gttctgtcca 60

caggaaagtg agattgggtcc gatttccac atcttctgac cacgtcccat tgtgggcagt 120

acgatgcttc accacgtacc tcttcacact acacagtgag tcattt 166

<210> 36

<211> 320

<212> DNA

<213> Mus musculus

<400> 36

ggtgaagcat cgtactgccc acaatgggac gtggtcagaa gatgtgggaa atcggaccaa 60

tctcactttc ctgtggacag aaccagcgca cactgttaca gttctggctg tcaattccct 120

cggcgcttcc cttgtgaatt ttaaccttac cttctcatgg cccatgagta aagtgagtgc 180

tgtggagtca ctcagtgtt atcccctgag cagcagctgt gtcaccttt cctggacact 240

gtcacctgat gattatagtc tggtatatct gggtattgaa tggaagatcc ttaatgaaga 300

tgatggaatg aagtggctta 320

<210> 37

<211> 158

<212> DNA

<213> Mus musculus

<400> 37

gattactgga gatgcagttg ctgacaggac tatggataaa cccttgctct tcatcagttt 60

ccactagttt atcgttgctg accagagttg catatttaac tgaggggtgt ctctgacact 120

catcctcaca ggttacctgg gtgctctgag acccagag 158

<210> 38

<211> 192

<212> DNA

<213> Mus musculus

<400> 38

agagagatcc ctgaccctag ttagatctgt tttcaggctc tgtgttcatt tgatgttcag 60

aagtcagcaa gggtctcata tgtcctgagt tagtaagatg tctcagggtt ccccatcag 120

ctaacaacca ctttgacatg agaaggcaga aagttaaaga acactacttg gtgttttact 180

taaagatacg ag 192

C3

<210> 39  
 <211> 168  
 <212> DNA  
 <213> Mus musculus  
  
 <220>  
 <221> misc\_feature  
 <222> (55)..(55)  
 <223> N can be A, C, T or G

<220>  
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 <222> (62)..(62)  
 <223> N can be A, C, T or G

<220>  
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 <222> (72)..(72)  
 <223> N can be A, C, T or G

<220>  
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 <222> (143)..(143)  
 <223> N can be A, C, T or G

C3  
 <400> 39  
 agactgacaa ggaagttttc tcatactaaca agcaagcaaa ggaactgctt atgtntctgtg 60  
 angaaccaag gnagctcaga tgtcaccata gtcacatga actcgagtga ctctgccact 120  
 gttccccccag gatgtgcttg gangataatc ctgcgcaaga aacagata 168

<210> 40  
 <211> 259  
 <212> DNA  
 <213> Mus musculus

<220>  
 <221> misc\_feature  
 <222> (83)..(83)  
 <223> N can be A, C, T or G

<220>  
 <221> misc\_feature  
 <222> (101)..(101)  
 <223> N can be A, C, T or G

<220>  
 <221> misc\_feature  
 <222> (181)..(181)  
 <223> N can be A, C, T or G



<400> 40  
agaattatga ctctaaggtc catcttttat atgatctgcc tgaagtcata gatgattcgc 60  
ctctgcccc actgaaagac agntttcaga ctgtccaatg naactgcagt cttcgggggat 120  
gtgaatgtca tgtgccagta cccagagcca aactcaacta cgctcttctg atgtatttgg 180  
naatcacatc tgccggtgtg agttttcagt cacctctgat gtcactgcag cccatgcttg 240  
ttgtgaaacc cgatccacc 259

<210> 41  
<211> 250  
<212> DNA  
<213> Mus musculus

<220>  
<221> misc\_feature  
<222> (193)..(193)  
<223> N can be A, C, T or G

<400> 41  
cttcaacaat tggttcagaa gcccccttca aagccgaggc attgtttggg gctccagcag 60  
gtgagagaaa ggagtcacgc gttgtgttcg gtgggtccaca aaacaactta aatttccagg 120  
gagagattgg atatgccagg ttaagtgcag ctatcacata aagaaattcc cagtgttaaca 180  
aaaccacata gantttctaa cacatcatct ttcttcagag gtgtacacct ggatttgcag 240  
aacgattcct 250

<210> 42  
<211> 18  
<212> DNA  
<213> Mus musculus

<400> 42  
ccgaggggaat tgacagcc 18

<210> 43  
<211> 22  
<212> DNA  
<213> Mus musculus

<400> 43  
ctcactgtgt agtgtgagga gg 22

<210> 44  
<211> 19  
<212> DNA  
<213> Mus musculus

<400> 44  
tctgtggac agaaccagc 19

C3

<210> 45  
 <211> 19  
 <212> DNA  
 <213> Mus musculus  
  
 <400> 45  
 tgacacagct gctgctcag 19  
  
 <210> 46  
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 <212> DNA  
 <213> Mus musculus  
  
 <400> 46  
 ggtctcagag caccaggtta 20  
  
 <210> 47  
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 <213> Mus musculus  
  
 <400> 47  
 agagagatcc ctgaccctag tt 22  
  
 <210> 48  
 <211> 26  
 <212> DNA  
 <213> Mus musculus  
  
 <400> 48  
 aactttctgc cttccttctc atgtca 26  
  
 <210> 49  
 <211> 22  
 <212> DNA  
 <213> Mus musculus  
  
 <400> 49  
 tttctcatct aacaagcaag ca 22  
  
 <210> 50  
 <211> 20  
 <212> DNA  
 <213> Mus musculus  
  
 <400> 50  
 atctgtttct tgcgcaggat 20  
  
 <210> 51  
 <211> 18  
 <212> DNA  
 <213> Mus musculus

C3

<400> 51  
cattgtttgg ggctccag 18

<210> 52  
<211> 20  
<212> DNA  
<213> Mus musculus

<400> 52  
aatcgttctg caaatccagg 20

<210> 53  
<211> 21  
<212> DNA  
<213> Mus musculus

<400> 53  
tgaagtcata gatgattcgc c 21

<210> 54  
<211> 20  
<212> DNA  
<213> Mus musculus

<400> 54  
gttcgtaccc gacgtcactg 20

<210> 55  
<211> 894  
<212> PRT  
<213> Mus musculus

<400> 55

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
1 5 10 15

Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
20 25 30

Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
35 40 45

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
65 70 75 80

Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
85 90 95

C3

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
195 200 205

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
245 250 255

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
290 295 300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

C3

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
450 455 460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys

C3

580

585

590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
610 615 620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
690 695 700

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile  
785 790 795 800

Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly  
805 810 815

Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp  
820 825 830

C3

Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile  
835 840 845

Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg  
850 855 860

Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser  
865 870 875 880

Trp Ala Gln Gly Leu Asn Phe Gln Lys Arg Thr Asp Thr Leu  
885 890

<210> 56

<211> 1165

<212> PRT

<213> Homo sapiens

<400> 56

Met Ile Cys Gln Lys Phe Cys Val Val Leu Leu His Trp Glu Phe Ile  
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Tyr Val Ile Thr Ala Phe Asn Leu Ser Tyr Pro Ile Thr Pro Trp Arg  
20 25 30

Phe Lys Leu Ser Cys Met Pro Pro Asn Ser Thr Tyr Asp Tyr Phe Leu  
35 40 45

Leu Pro Ala Gly Leu Ser Lys Asn Thr Ser Asn Ser Asn Gly His Tyr  
50 55 60

Glu Thr Ala Val Glu Pro Lys Phe Asn Ser Ser Gly Thr His Phe Ser  
65 70 75 80

Asn Leu Ser Lys Thr Thr Phe His Cys Cys Phe Arg Ser Glu Gln Asp  
85 90 95

Arg Asn Cys Ser Leu Cys Ala Asp Asn Ile Glu Gly Lys Thr Phe Val  
100 105 110

Ser Thr Val Asn Ser Leu Val Phe Gln Gln Ile Asp Ala Asn Trp Asn  
115 120 125

Ile Gln Cys Trp Leu Lys Gly Asp Leu Lys Leu Phe Ile Cys Tyr Val  
130 135 140

C3

Glu Ser Leu Phe Lys Asn Leu Phe Arg Asn Tyr Asn Tyr Lys Val His  
145 150 155 160

Leu Leu Tyr Val Leu Pro Glu Val Leu Glu Asp Ser Pro Leu Val Pro  
165 170 175

Gln Lys Gly Ser Phe Gln Met Val His Cys Asn Cys Ser Val His Glu  
180 185 190

Cys Cys Glu Cys Leu Val Pro Val Pro Thr Ala Lys Leu Asn Asp Thr  
195 200 205

Leu Leu Met Cys Leu Lys Ile Thr Ser Gly Gly Val Ile Phe Gln Ser  
210 215 220

Pro Leu Met Ser Val Gln Pro Ile Asn Met Val Lys Pro Asp Pro Pro  
225 230 235 240

Leu Gly Leu His Met Glu Ile Thr Asp Asp Gly Asn Leu Lys Ile Ser  
245 250 255

Trp Ser Ser Pro Pro Leu Val Pro Phe Pro Leu Gln Tyr Gln Val Lys  
260 265 270

Tyr Ser Glu Asn Ser Thr Thr Val Ile Arg Glu Ala Asp Lys Ile Val  
275 280 285

Ser Ala Thr Ser Leu Leu Val Asp Ser Ile Leu Pro Gly Ser Ser Tyr  
290 295 300

Glu Val Gln Val Arg Gly Lys Arg Leu Asp Gly Pro Gly Ile Trp Ser  
305 310 315 320

Asp Trp Ser Thr Pro Arg Val Phe Thr Thr Gln Asp Val Ile Tyr Phe  
325 330 335

Pro Pro Lys Ile Leu Thr Ser Val Gly Ser Asn Val Ser Phe His Cys  
340 345 350

Ile Tyr Lys Lys Glu Asn Lys Ile Val Pro Ser Lys Glu Ile Val Trp  
355 360 365

Trp Met Asn Leu Ala Glu Lys Ile Pro Gln Ser Gln Tyr Asp Val Val  
370 375 380

Ser Asp His Val Ser Lys Val Thr Phe Phe Asn Leu Asn Glu Thr Lys

C3



385		390		395		400
Pro Arg Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu His						
		405		410		415
Glu Cys His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile						
		420		425		430
Asn Ile Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg						
		435		440		445
Trp Ser Thr Ser Thr Ile Gln Ser Leu Ala Glu Ser Thr Leu Gln Leu						
		450		455		460
Arg Tyr His Arg Ser Ser Leu Tyr Cys Ser Asp Ile Pro Ser Ile His						
		465		470		475
Pro Ile Ser Glu Pro Lys Asp Cys Tyr Leu Gln Ser Asp Gly Phe Tyr						
		485		490		495
Glu Cys Ile Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp						
		500		505		510
Ile Arg Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys						
		515		520		525
Val Leu Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Ser Val Lys						
		530		535		540
Ala Glu Ile Thr Ile Asn Ile Gly Leu Leu Lys Ile Ser Trp Glu Lys						
		545		550		555
Pro Val Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu						
		565		570		575
Ser Gly Lys Glu Val Gln Trp Lys Met Tyr Glu Val Tyr Asp Ala Lys						
		580		585		590
Ser Lys Ser Val Ser Leu Pro Val Pro Asp Leu Cys Ala Val Tyr Ala						
		595		600		605
Val Gln Val Arg Cys Lys Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn						
		610		615		620
Trp Ser Asn Pro Ala Tyr Thr Val Val Met Asp Ile Lys Val Pro Met						
		625		630		635
						640

C3

Arg Gly Pro Glu Phe Trp Arg Ile Ile Asn Gly Asp Thr Met Lys Lys  
645 650 655

Glu Lys Asn Val Thr Leu Leu Trp Lys Pro Leu Met Lys Asn Asp Ser  
660 665 670

Leu Cys Ser Val Gln Arg Tyr Val Ile Asn His His Thr Ser Cys Asn  
675 680 685

Gly Thr Trp Ser Glu Asp Val Gly Asn His Thr Lys Phe Thr Phe Leu  
690 695 700

Trp Thr Glu Gln Ala His Thr Val Thr Val Leu Ala Ile Asn Ser Ile  
705 710 715 720

Gly Ala Ser Val Ala Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser  
725 730 735

Lys Val Asn Ile Val Gln Ser Leu Ser Ala Tyr Pro Leu Asn Ser Ser  
740 745 750

Cys Val Ile Val Ser Trp Ile Leu Ser Pro Ser Asp Tyr Lys Leu Met  
755 760 765

Tyr Phe Ile Ile Glu Trp Lys Asn Leu Asn Glu Asp Gly Glu Ile Lys  
770 775 780

Trp Leu Arg Ile Ser Ser Ser Val Lys Lys Tyr Tyr Ile His Asp His  
785 790 795 800

Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Ile Phe Met  
805 810 815

Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Ser Phe Thr Gln Asp Asp  
820 825 830

Ile Glu Lys His Gln Ser Asp Ala Gly Leu Tyr Val Ile Val Pro Val  
835 840 845

Ile Ile Ser Ser Ser Ile Leu Leu Leu Gly Thr Leu Leu Ile Ser His  
850 855 860

Gln Arg Met Lys Lys Leu Phe Trp Glu Asp Val Pro Asn Pro Lys Asn  
865 870 875 880

C3

Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Pro Glu Thr Phe Glu  
885 890 895

His Leu Phe Ile Lys His Thr Ala Ser Val Thr Cys Gly Pro Leu Leu  
900 905 910

Leu Glu Pro Glu Thr Ile Ser Glu Asp Ile Ser Val Asp Thr Ser Trp  
915 920 925

Lys Asn Lys Asp Glu Met Met Pro Thr Thr Val Val Ser Leu Leu Ser  
930 935 940

Thr Thr Asp Leu Glu Lys Gly Ser Val Cys Ile Ser Asp Gln Phe Asn  
945 950 955 960

Ser Val Asn Phe Ser Glu Ala Glu Gly Thr Glu Val Thr Tyr Glu Ala  
965 970 975

Glu Ser Gln Arg Gln Pro Phe Val Lys Tyr Ala Thr Leu Ile Ser Asn  
980 985 990

Ser Lys Pro Ser Glu Thr Gly Glu Glu Gln Gly Leu Ile Asn Ser Ser  
995 1000 1005

Val Thr Lys Cys Phe Ser Ser Lys Asn Ser Pro Leu Lys Asp Ser  
1010 1015 1020

Phe Ser Asn Ser Ser Trp Glu Ile Glu Ala Gln Ala Phe Phe Ile  
1025 1030 1035

Leu Ser Asp Gln His Pro Asn Ile Ile Ser Pro His Leu Thr Phe  
1040 1045 1050

Ser Glu Gly Leu Asp Glu Leu Leu Lys Leu Glu Gly Asn Phe Pro  
1055 1060 1065

Glu Glu Asn Asn Asp Lys Lys Ser Ile Tyr Tyr Leu Gly Val Thr  
1070 1075 1080

Ser Ile Lys Lys Arg Glu Ser Gly Val Leu Leu Thr Asp Lys Ser  
1085 1090 1095

Arg Val Ser Cys Pro Phe Pro Ala Pro Cys Leu Phe Thr Asp Ile  
1100 1105 1110

C3

Arg Val Leu Gln Asp Ser Cys Ser His Phe Val Glu Asn Asn Ile  
1115 1120 1125

Asn Leu Gly Thr Ser Ser Lys Lys Thr Phe Ala Ser Tyr Met Pro  
1130 1135 1140

Gln Phe Gln Thr Cys Ser Thr Gln Thr His Lys Ile Met Glu Asn  
1145 1150 1155

Lys Met Cys Asp Leu Thr Val  
1160 1165

<210> 57

<211> 1110

<212> PRT

<213> Mus musculus

<220>

<221> MISC\_FEATURE

<222> (29)..(29)

<223> X can be any amino acid

<400> 57

Gly Leu Arg Ser Ala Ser Tyr Gln Pro Leu Lys Arg Phe Ser Arg Phe  
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C3 Gln Ala Leu Ser Pro Cys Arg Ile Ser Thr Ser Leu Xaa Leu Val Pro  
20 25 30

Asn Ser Ala Arg Gly Cys Phe Gly Asn Glu Gln Gly Gln Asn Cys Ser  
35 40 45

Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala Ser Val Val Lys  
50 55 60

Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp Ile Glu Cys Trp  
65 70 75 80

Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met Glu Pro Leu Pro  
85 90 95

Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His Leu Leu Tyr Asp  
100 105 110

Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro Leu Lys Asp Ser  
115 120 125

Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly Cys Glu Cys His  
130 135 140

Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu Leu Met Tyr Leu  
145 150 155 160

Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro Leu Met Ser Leu  
165 170 175

Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met  
180 185 190

Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp Asp Ser Gln Thr  
195 200 205

Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr Leu Glu Asn Ser  
210 215 220

Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala Thr Ser Leu Leu  
225 230 235 240

Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val Gln Val Arg Ser  
245 250 255

Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp Ser Ser Pro Gln  
260 265 270

Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro Lys Ile Leu Thr  
275 280 285

Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr Lys Asn Glu Asn  
290 295 300

Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg Asn Leu Ala Glu  
305 310 315 320

Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp Arg Val Ser Lys  
325 330 335

Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg Gly Lys Phe Thr  
340 345 350

Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys His His Arg Tyr  
355 360 365

Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile Ser Cys Glu Thr

C3

370

375

380

Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser Pro Ser Thr Ile  
385 390 395 400

Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr His Arg Arg Ser  
405 410 415

Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr Ser Glu Pro Lys  
420 425 430

Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys Val Phe Gln Pro  
435 440 445

Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg Ile Asn His Ser  
450 455 460

Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu Pro Asp Ser Val  
465 470 475 480

Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu Ile Thr Val Asn  
485 490 495

Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val Phe Pro Glu Asn  
500 505 510

Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly Lys Glu Ile Gln  
515 520 525

Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys Ser Ala Ser Leu  
530 535 540

Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln Val Arg Cys Arg  
545 550 555 560

Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser Ser Pro Ala Tyr  
565 570 575

Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly Pro Glu Phe Trp  
580 585 590

Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg Asn Val Thr Leu  
595 600 605

Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg  
610 615 620

C3

Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
625 630 635 640

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
645 650 655

Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn  
660 665 670

Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu  
675 680 685

Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp  
690 695 700

Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp  
705 710 715 720

Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser  
725 730 735

Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys  
740 745 750

Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro  
755 760 765

Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn  
770 775 780

Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val  
785 790 795 800

Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu  
805 810 815

Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly  
820 825 830

Leu Asn Phe Gln Lys Pro Glu Thr Phe Glu Gln Leu Phe Thr Lys His  
835 840 845

Ala Glu Ser Val Ile Phe Gly Pro Leu Leu Leu Glu Pro Glu Pro Ile  
850 855 860

C3

Ser Glu Glu Ile Ser Val Asp Thr Ala Trp Lys Asn Lys Asp Glu Met  
865 870 875 880

Val Pro Ala Ala Met Val Ser Leu Leu Leu Thr Thr Pro Asp Pro Glu  
885 890 895

Ser Ser Ser Ile Cys Ile Ser Asp Gln Cys Asn Ser Ala Asn Phe Ser  
900 905 910

Gly Ser Gln Ser Thr Gln Val Thr Cys Glu Asp Glu Cys Gln Arg Gln  
915 920 925

Pro Ser Val Lys Tyr Ala Thr Leu Val Ser Asn Asp Lys Leu Val Glu  
930 935 940

Thr Asp Glu Glu Gln Gly Phe Ile His Ser Pro Val Ser Asn Cys Ile  
945 950 955 960

Ser Ser Asn His Ser Pro Leu Arg Gln Ser Phe Ser Ser Ser Ser Trp  
965 970 975

Glu Thr Glu Ala Gln Thr Phe Phe Leu Leu Ser Asp Gln Gln Pro Thr  
980 985 990

Met Ile Ser Pro Gln Leu Ser Phe Ser Gly Leu Asp Glu Leu Leu Glu  
995 1000 1005

Leu Glu Gly Ser Phe Pro Glu Glu Asn His Arg Glu Lys Ser Val  
1010 1015 1020

Cys Tyr Leu Gly Val Thr Ser Val Asn Arg Arg Glu Ser Gly Val  
1025 1030 1035

Leu Leu Thr Gly Glu Ala Gly Ile Leu Cys Thr Phe Pro Ala Gln  
1040 1045 1050

Cys Leu Phe Ser Asp Ile Arg Ile Leu Gln Glu Arg Cys Ser His  
1055 1060 1065

Phe Val Glu Asn Asn Leu Ser Leu Gly Thr Ser Gly Glu Asn Phe  
1070 1075 1080

Val Pro Tyr Met Pro Gln Phe Gln Thr Cys Ser Thr His Ser His  
1085 1090 1095

C3



Lys Ile Met Glu Asn Lys Met Cys Asp Leu Thr Val  
 1100 1105 1110

<210> 58  
 <211> 840  
 <212> PRT  
 <213> Mus musculus

<220>  
 <221> MISC\_FEATURE  
 <222> (29)..(29)  
 <223> X can be any amino acid

<400> 58

Gly Leu Arg Ser Ala Ser Tyr Gln Pro Leu Lys Arg Phe Ser Arg Phe  
 1 5 10 15

Gln Ala Leu Ser Pro Cys Arg Ile Ser Thr Ser Leu Xaa Leu Val Pro  
 20 25 30

Asn Ser Ala Arg Gly Cys Phe Gly Asn Glu Gln Gly Gln Asn Cys Ser  
 35 40 45

Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala Ser Val Val Lys  
 50 55 60

Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp Ile Glu Cys Trp  
 65 70 75 80

Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met Glu Pro Leu Pro  
 85 90 95

Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His Leu Leu Tyr Asp  
 100 105 110

Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro Leu Lys Asp Ser  
 115 120 125

Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly Cys Glu Cys His  
 130 135 140

Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu Leu Met Tyr Leu  
 145 150 155 160

Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro Leu Met Ser Leu  
 165 170 175

C3

Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met  
 180 185 190

Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp Asp Ser Gln Thr  
 195 200 205

Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr Leu Glu Asn Ser  
 210 215 220

Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala Thr Ser Leu Leu  
 225 230 235 240

Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val Gln Val Arg Ser  
 245 250 255

Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp Ser Ser Pro Gln  
 260 265 270

Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro Lys Ile Leu Thr  
 275 280 285

Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr Lys Asn Glu Asn  
 290 295 300

Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg Asn Leu Ala Glu  
 305 310 315 320

Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp Arg Val Ser Lys  
 325 330 335

Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg Gly Lys Phe Thr  
 340 345 350

Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys His His Arg Tyr  
 355 360 365

Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile Ser Cys Glu Thr  
 370 375 380

Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser Pro Ser Thr Ile  
 385 390 395 400

Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr His Arg Arg Ser  
 405 410 415

Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr Ser Glu Pro Lys

C3

420

425

430

Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys Val Phe Gln Pro  
 435 440 445

Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg Ile Asn His Ser  
 450 455 460

Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu Pro Asp Ser Val  
 465 470 475 480

Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu Ile Thr Val Asn  
 485 490 495

Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val Phe Pro Glu Asn  
 500 505 510

Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly Lys Glu Ile Gln  
 515 520 525

Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys Ser Ala Ser Leu  
 530 535 540

Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln Val Arg Cys Arg  
 545 550 555 560

Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser Ser Pro Ala Tyr  
 565 570 575

Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly Pro Glu Phe Trp  
 580 585 590

Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg Asn Val Thr Leu  
 595 600 605

Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg  
 610 615 620

Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
 625 630 635 640

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
 645 650 655

Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn  
 660 665 670

C3

Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu  
675 680 685

Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp  
690 695 700

Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp  
705 710 715 720

Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser  
725 730 735

Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys  
740 745 750

Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro  
755 760 765

Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn  
770 775 780

Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val  
785 790 795 800

Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu  
805 810 815

Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly  
820 825 830

Leu Asn Phe Gln Lys Val Thr Val  
835 840

<210> 59  
<211> 848  
<212> PRT  
<213> Mus musculus

<220>  
<221> MISC\_FEATURE  
<222> (29)..(29)  
<223> X can be any amino acid

<400> 59

Gly Leu Arg Ser Ala Ser Tyr Gln Pro Leu Lys Arg Phe Ser Arg Phe  
1 5 10 15

C3

Gln Ala Leu Ser Pro Cys Arg Ile Ser Thr Ser Leu Xaa Leu Val Pro  
 20 25 30  
 Asn Ser Ala Arg Gly Cys Phe Gly Asn Glu Gln Gly Gln Asn Cys Ser  
 35 40 45  
 Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala Ser Val Val Lys  
 50 55 60  
 Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp Ile Glu Cys Trp  
 65 70 75 80  
 Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met Glu Pro Leu Pro  
 85 90 95  
 Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His Leu Leu Tyr Asp  
 100 105 110  
 Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro Leu Lys Asp Ser  
 115 120 125  
 Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly Cys Glu Cys His  
 130 135 140  
 Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu Leu Met Tyr Leu  
 145 150 155 160  
 Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro Leu Met Ser Leu  
 165 170 175  
 Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met  
 180 185 190  
 Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp Asp Ser Gln Thr  
 195 200 205  
 Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr Leu Glu Asn Ser  
 210 215 220  
 Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala Thr Ser Leu Leu  
 225 230 235 240  
 Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val Gln Val Arg Ser  
 245 250 255

C3

Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp Ser Ser Pro Gln  
 260 265 270  
 Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro Lys Ile Leu Thr  
 275 280 285  
 Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr Lys Asn Glu Asn  
 290 295 300  
 Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg Asn Leu Ala Glu  
 305 310 315 320  
 Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp Arg Val Ser Lys  
 325 330 335  
 Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg Gly Lys Phe Thr  
 340 345 350  
 Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys His His Arg Tyr  
 355 360 365  
 Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile Ser Cys Glu Thr  
 370 375 380  
 Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser Pro Ser Thr Ile  
 385 390 395 400  
 Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr His Arg Arg Ser  
 405 410 415  
 Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr Ser Glu Pro Lys  
 420 425 430  
 Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys Val Phe Gln Pro  
 435 440 445  
 Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg Ile Asn His Ser  
 450 455 460  
 Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu Pro Asp Ser Val  
 465 470 475 480  
 Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu Ile Thr Val Asn  
 485 490 495

C3

Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val Phe Pro Glu Asn  
500 505 510

Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly Lys Glu Ile Gln  
515 520 525

Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys Ser Ala Ser Leu  
530 535 540

Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln Val Arg Cys Arg  
545 550 555 560

Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser Ser Pro Ala Tyr  
565 570 575

Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly Pro Glu Phe Trp  
580 585 590

Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg Asn Val Thr Leu  
595 600 605

Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg  
610 615 620

Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
625 630 635 640

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
645 650 655

Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn  
660 665 670

Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu  
675 680 685

Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp  
690 695 700

Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp  
705 710 715 720

Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser  
725 730 735

Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys

C3

740

745

750

Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro  
755 760 765

Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn  
770 775 780

Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val  
785 790 795 800

Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu  
805 810 815

Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly  
820 825 830

Leu Asn Phe Gln Lys Asp Ile Ser Leu His Glu Val Phe Ile Phe Arg  
835 840 845

<210> 60

<211> 314

<212> PRT

<213> Mus musculus

<220>

<221> MISC\_FEATURE

<222> (79)..(79)

<223> X can be any amino acid

<400> 60

Leu Arg Asp Leu Val Ser Gly Phe Glu Glu Ile Asn Lys Ile Lys Glu  
1 5 10 15

Asn Phe Ser Arg Ala Gly Leu Leu Ala Glu Leu Arg Pro Thr Ala Phe  
20 25 30

Tyr Ile Ser Thr Leu Ser Leu Phe Pro Ser Ala Leu Ala Leu Asp Trp  
35 40 45

Ala Val Pro Gly Leu Val Leu Leu Phe Pro Gly Gly Asn Val Glu Leu  
50 55 60

His Glu Phe Trp Tyr Lys His Cys Gly Leu Cys Ala Asn Ile Xaa Cys  
65 70 75 80

Phe Leu Gln Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg

C3



85

90

95

Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
100 105 110

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
115 120 125

Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn  
130 135 140

Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu  
145 150 155 160

Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp  
165 170 175

Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp  
180 185 190

Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser  
195 200 205

Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys  
210 215 220

Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro  
225 230 235 240

Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn  
245 250 255

Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val  
260 265 270

Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu  
275 280 285

Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly  
290 295 300

Leu Asn Phe Gln Lys Arg Thr Asp Thr Leu  
305 310

<210> 61

<211> 321

C3

<212> PRT  
 <213> Mus musculus  
 <220>  
 <221> MISC\_FEATURE  
 <222> (14)..(14)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (19)..(19)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (25)..(25)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (58)..(58)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (67)..(67)  
 <223> X can be any amino acid

C3

<220>  
 <221> MISC\_FEATURE  
 <222> (68)..(68)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (84)..(84)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (86)..(86)  
 <223> X can be any amino acid

<400> 61

Leu Arg Asp Leu Val Ser Gly Phe Glu Glu Ile Asn Lys Xaa Ile Lys  
 1 5 10 15

Glu Asn Xaa Phe Ser Arg Ala Gly Xaa Leu Leu Ala Glu Leu Arg Pro  
 20 25 30

Thr Ala Phe Tyr Ile Ser Thr Leu Ser Leu Phe Pro Ser Ala Leu Ala  
 35 40 45  
 Leu Asp Trp Ala Val Pro Gly Leu Val Xaa Leu Leu Phe Pro Gly Gly  
 50 55 60  
 Asn Val Xaa Xaa Glu Leu His Glu Phe Trp Tyr Lys His Cys Gly Leu  
 65 70 75 80  
 Cys Ala Asn Xaa Ile Xaa Cys Phe Leu Gln Pro Leu Thr Lys Asn Asp  
 85 90 95  
 Ser Leu Cys Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His  
 100 105 110  
 Asn Gly Thr Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe  
 115 120 125  
 Leu Trp Thr Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser  
 130 135 140  
 Leu Gly Ala Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met  
 145 150 155 160  
 Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser  
 165 170 175  
 Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu  
 180 185 190  
 Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met  
 195 200 205  
 Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp  
 210 215 220  
 Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe  
 225 230 235 240  
 Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp  
 245 250 255  
 Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro  
 260 265 270  
 Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser

C3

275

280

285

His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys  
 290 295 300

Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Arg Thr Asp Thr  
 305 310 315 320

Leu

<210> 62  
 <211> 320  
 <212> PRT  
 <213> Mus musculus

<220>  
 <221> MISC\_FEATURE  
 <222> (79)..(79)  
 <223> X can be any amino acid

&lt;400&gt; 62

Leu Arg Asp Leu Val Ser Gly Phe Glu Glu Ile Asn Lys Ile Lys Glu  
 1 5 10 15

Asn Phe Ser Arg Ala Gly Leu Leu Ala Glu Leu Arg Pro Thr Ala Phe  
 20 25 30

Tyr Ile Ser Thr Leu Ser Leu Phe Pro Ser Ala Leu Ala Leu Asp Trp  
 35 40 45

Ala Val Pro Gly Leu Val Leu Leu Phe Pro Gly Gly Asn Val Glu Leu  
 50 55 60

His Glu Phe Trp Tyr Lys His Cys Gly Leu Cys Ala Asn Ile Xaa Cys  
 65 70 75 80

Phe Leu Gln Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg  
 85 90 95

Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
 100 105 110

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
 115 120 125

Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn

C3

130		135		140
Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu				
145		150		155 160
Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp				
	165		170	175
Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp				
	180		185	190
Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser				
	195		200	205
Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys				
	210		215	220
Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro				
	225		230 235	240
Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn				
	245		250	255
Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val				
	260		265	270
Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu				
	275		280	285
Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly				
	290		295	300
Leu Asn Phe Gln Lys Asp Ile Ser Leu His Glu Val Phe Ile Phe Arg				
	305		310 315	320

<210> 63  
 <211> 327  
 <212> PRT  
 <213> Mus musculus  
  
 <220>  
 <221> MISC\_FEATURE  
 <222> (14)..(14)  
 <223> X can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (19)..(19)

Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
 20 25 30  
 Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
 35 40 45  
 Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
 50 55 60  
 Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
 65 70 75 80  
 Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
 85 90 95  
 Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
 100 105 110  
 Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
 115 120 125  
 Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
 130 135 140  
 Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
 145 150 155 160  
 Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
 165 170 175  
 Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
 180 185 190  
 Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
 195 200 205  
 Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
 210 215 220  
 Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
 225 230 235 240  
 Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
 245 250 255

C3

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
290 295 300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
450 455 460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg

C3

500					505					510					
Ile	Asn	His	Ser	Leu	Gly	Ser	Leu	Asp	Ser	Pro	Pro	Thr	Cys	Val	Leu
		515						520					525		
Pro	Asp	Ser	Val	Val	Lys	Pro	Leu	Pro	Pro	Ser	Asn	Val	Lys	Ala	Glu
	530						535				540				
Ile	Thr	Val	Asn	Thr	Gly	Leu	Leu	Lys	Val	Ser	Trp	Glu	Lys	Pro	Val
545					550					555					560
Phe	Pro	Glu	Asn	Asn	Leu	Gln	Phe	Gln	Ile	Arg	Tyr	Gly	Leu	Ser	Gly
				565					570					575	
Lys	Glu	Ile	Gln	Trp	Lys	Thr	His	Glu	Val	Phe	Asp	Ala	Lys	Ser	Lys
			580					585					590		
Ser	Ala	Ser	Leu	Leu	Val	Ser	Asp	Leu	Cys	Ala	Val	Tyr	Val	Val	Gln
		595					600					605			
Val	Arg	Cys	Arg	Arg	Leu	Asp	Gly	Leu	Gly	Tyr	Trp	Ser	Asn	Trp	Ser
	610					615					620				
Ser	Pro	Ala	Tyr	Thr	Leu	Val	Met	Asp	Val	Lys	Val	Pro	Met	Arg	Gly
625					630					635					640
Pro	Glu	Phe	Trp	Arg	Lys	Met	Asp	Gly	Asp	Val	Thr	Lys	Lys	Glu	Arg
				645					650					655	
Asn	Val	Thr	Leu	Leu	Trp	Lys	Pro	Leu	Thr	Lys	Asn	Asp	Ser	Leu	Cys
			660					665					670		
Ser	Val	Arg	Arg	Tyr	Val	Val	Lys	His	Arg	Thr	Ala	His	Asn	Gly	Thr
		675					680					685			
Trp	Ser	Glu	Asp	Val	Gly	Asn	Arg	Thr	Asn	Leu	Thr	Phe	Leu	Trp	Thr
	690					695					700				
Glu	Pro	Ala	His	Thr	Val	Thr	Val	Leu	Ala	Val	Asn	Ser	Leu	Gly	Ala
705					710					715					720
Ser	Leu	Val	Asn	Phe	Asn	Leu	Thr	Phe	Ser	Trp	Pro	Met	Ser	Lys	Val
				725					730					735	
Ser	Ala	Val	Glu	Ser	Leu	Ser	Ala	Tyr	Pro	Leu	Ser	Ser	Ser	Cys	Val
			740					745					750		

C3



Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile  
785 790 795 800

Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly  
805 810 815

Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp  
820 825 830

Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile  
835 840 845

Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg  
850 855 860

Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser  
865 870 875 880

Trp Ala Gln Gly Leu Asn Phe Gln Lys Pro Glu Thr Phe Glu Gln Leu  
885 890 895

Phe Thr Lys His Ala Glu Ser Val Ile Phe Gly Pro Leu Leu Leu Glu  
900 905 910

Pro Glu Pro Ile Ser Glu Glu Ile Ser Val Asp Thr Ala Trp Lys Asn  
915 920 925

Lys Asp Glu Met Val Pro Ala Ala Met Val Ser Leu Leu Leu Thr Thr  
930 935 940

Pro Asp Pro Glu Ser Ser Ser Ile Cys Ile Ser Asp Gln Cys Asn Ser  
945 950 955 960

Ala Asn Phe Ser Gly Ser Gln Ser Thr Gln Val Thr Cys Glu Asp Glu  
965 970 975

Cys Gln Arg Gln Pro Ser Val Lys Tyr Ala Thr Leu Val Ser Asn Asp  
980 985 990

C3

Lys Leu Val Glu Thr Asp Glu Glu Gln Gly Phe Ile His Ser Pro Val  
 995 1000 1005

Ser Asn Cys Ile Ser Ser Asn His Ser Pro Leu Arg Gln Ser Phe  
 1010 1015 1020

Ser Ser Ser Ser Trp Glu Thr Glu Ala Gln Thr Phe Phe Leu Leu  
 1025 1030 1035

Ser Asp Gln Gln Pro Thr Met Ile Ser Pro Gln Leu Ser Phe Ser  
 1040 1045 1050

Gly Leu Asp Glu Leu Leu Glu Leu Glu Gly Ser Phe Pro Glu Glu  
 1055 1060 1065

Asn His Arg Glu Lys Ser Val Cys Tyr Leu Gly Val Thr Ser Val  
 1070 1075 1080

Asn Arg Arg Glu Ser Gly Val Leu Leu Thr Gly Glu Ala Gly Ile  
 1085 1090 1095

Leu Cys Thr Phe Pro Ala Gln Cys Leu Phe Ser Asp Ile Arg Ile  
 1100 1105 1110

Leu Gln Glu Arg Cys Ser His Phe Val Glu Asn Asn Leu Ser Leu  
 1115 1120 1125

Gly Thr Ser Gly Glu Asn Phe Val Pro Tyr Met Pro Gln Phe Gln  
 1130 1135 1140

Thr Cys Ser Thr His Ser His Lys Ile Met Glu Asn Lys Met Cys  
 1145 1150 1155

Asp Leu Thr Val  
 1160

<210> 66  
 <211> 892  
 <212> PRT  
 <213> Mus musculus

<400> 66

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
 1 5 10 15

Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys

C3

20

25

30

Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
35 40 45

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
65 70 75 80

Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
85 90 95

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
195 200 205

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
245 250 255

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

C3

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
290 295 300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
450 455 460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

C3

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
580 585 590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
610 615 620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
690 695 700

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

C3

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile  
785 790 795 800

Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly  
805 810 815

Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp  
820 825 830

Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile  
835 840 845

Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg  
850 855 860

Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser  
865 870 875 880

Trp Ala Gln Gly Leu Asn Phe Gln Lys Val Thr Val  
885 890

<210> 67  
<211> 231  
<212> PRT  
<213> Mus musculus

<400> 67

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

C3

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe  
130 135 140

Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile  
145 150 155 160

Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly  
165 170 175

Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu  
180 185 190

Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp  
195 200 205

Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe  
210 215 220

Gln Lys Arg Thr Asp Thr Leu  
225 230

<210> 68  
<211> 499  
<212> PRT  
<213> Mus musculus

<400> 68

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

03

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe  
130 135 140

Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile  
145 150 155 160

Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly  
165 170 175

Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu  
180 185 190

Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp  
195 200 205

Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe  
210 215 220

Gln Lys Pro Glu Thr Phe Glu Gln Leu Phe Thr Lys His Ala Glu Ser  
225 230 235 240

Val Ile Phe Gly Pro Leu Leu Leu Glu Pro Glu Pro Ile Ser Glu Glu  
245 250 255

Ile Ser Val Asp Thr Ala Trp Lys Asn Lys Asp Glu Met Val Pro Ala  
260 265 270

Ala Met Val Ser Leu Leu Leu Thr Thr Pro Asp Pro Glu Ser Ser Ser  
275 280 285

Ile Cys Ile Ser Asp Gln Cys Asn Ser Ala Asn Phe Ser Gly Ser Gln

C3



<223> X can be any amino acid

<220>

<221> MISC\_FEATURE

<222> (25)..(25)

<223> X can be any amino acid

<220>

<221> MISC\_FEATURE

<222> (58)..(58)

<223> X can be any amino acid

<220>

<221> MISC\_FEATURE

<222> (67)..(67)

<223> X can be any amino acid

<220>

<221> MISC\_FEATURE

<222> (68)..(68)

<223> X can be any amino acid

<220>

<221> MISC\_FEATURE

<222> (84)..(84)

<223> X can be any amino acid

<220>

<221> MISC\_FEATURE

<222> (86)..(86)

<223> X can be any amino acid

<400> 63

Leu Arg Asp Leu Val Ser Gly Phe Glu Glu Ile Asn Lys Xaa Ile Lys  
1 5 10 15

Glu Asn Xaa Phe Ser Arg Ala Gly Xaa Leu Leu Ala Glu Leu Arg Pro  
20 25 30

Thr Ala Phe Tyr Ile Ser Thr Leu Ser Leu Phe Pro Ser Ala Leu Ala  
35 40 45

Leu Asp Trp Ala Val Pro Gly Leu Val Xaa Leu Leu Phe Pro Gly Gly  
50 55 60

Asn Val Xaa Xaa Glu Leu His Glu Phe Trp Tyr Lys His Cys Gly Leu  
65 70 75 80

C3

Cys Ala Asn Xaa Ile Xaa Cys Phe Leu Gln Pro Leu Thr Lys Asn Asp  
85 90 95

Ser Leu Cys Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His  
100 105 110

Asn Gly Thr Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe  
115 120 125

Leu Trp Thr Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser  
130 135 140

Leu Gly Ala Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met  
145 150 155 160

Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser  
165 170 175

Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu  
180 185 190

Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met  
195 200 205

Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp  
210 215 220

Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe  
225 230 235 240

Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp  
245 250 255

Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro  
260 265 270

Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser  
275 280 285

His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys  
290 295 300

Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Asp Ile Ser Leu  
305 310 315 320

His Glu Val Phe Ile Phe Arg

C3

<210> 64  
 <211> 894  
 <212> PRT  
 <213> Mus musculus

<400> 64

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
 1 5 10 15

Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
 20 25 30

Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
 35 40 45

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
 50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
 65 70 75 80

Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
 85 90 95

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
 100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
 115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
 130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
 145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
 165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
 180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
 195 200 205

C3

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
245 250 255

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
290 295 300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

C3

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
450 455 460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Cln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
580 585 590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
610 615 620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr

690

695

700

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile  
785 790 795 800

Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly  
805 810 815

Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp  
820 825 830

Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile  
835 840 845

Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg  
850 855 860

Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser  
865 870 875 880

Trp Ala Gln Gly Leu Asn Phe Gln Lys Arg Thr Asp Thr Leu  
885 890

<210> 65

<211> 1162

<212> PRT

<213> Mus musculus

<400> 65

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
1 5 10 15

C3

290

295

300

Ser Thr Gln Val Thr Cys Glu Asp Glu Cys Gln Arg Gln Pro Ser Val  
305 310 315 320

Lys Tyr Ala Thr Leu Val Ser Asn Asp Lys Leu Val Glu Thr Asp Glu  
325 330 335

Glu Gln Gly Phe Ile His Ser Pro Val Ser Asn Cys Ile Ser Ser Asn  
340 345 350

His Ser Pro Leu Arg Gln Ser Phe Ser Ser Ser Ser Trp Glu Thr Glu  
355 360 365

Ala Gln Thr Phe Phe Leu Leu Ser Asp Gln Gln Pro Thr Met Ile Ser  
370 375 380

Pro Gln Leu Ser Phe Ser Gly Leu Asp Glu Leu Leu Glu Leu Glu Gly  
385 390 395 400

Ser Phe Pro Glu Glu Asn His Arg Glu Lys Ser Val Cys Tyr Leu Gly  
405 410 415

Val Thr Ser Val Asn Arg Arg Glu Ser Gly Val Leu Leu Thr Gly Glu  
420 425 430

Ala Gly Ile Leu Cys Thr Phe Pro Ala Gln Cys Leu Phe Ser Asp Ile  
435 440 445

Arg Ile Leu Gln Glu Arg Cys Ser His Phe Val Glu Asn Asn Leu Ser  
450 455 460

Leu Gly Thr Ser Gly Glu Asn Phe Val Pro Tyr Met Pro Gln Phe Gln  
465 470 475 480

Thr Cys Ser Thr His Ser His Lys Ile Met Glu Asn Lys Met Cys Asp  
485 490 495

Leu Thr Val

<210> 69

<211> 229

<212> PRT

<213> Mus musculus

<400> 69

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe  
130 135 140

Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile  
145 150 155 160

Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly  
165 170 175

Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu  
180 185 190

Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp  
195 200 205

Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe  
210 215 220

Gln Lys Val Thr Val  
225

C3



<210> 70  
<211> 237  
<212> PRT  
<213> Mus musculus

<400> 70

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe  
130 135 140

Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile  
145 150 155 160

Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly  
165 170 175

Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu  
180 185 190

Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp  
195 200 205

Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe  
210 215 220

C3

Gln Lys Asp Ile Ser Leu His Glu Val Phe Ile Phe Arg  
225 230 235

<210> 71  
<211> 162  
<212> PRT  
<213> Mus musculus

<400> 71

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser  
1 5 10 15

Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
20 25 30

Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
35 40 45

Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
50 55 60

Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val  
65 70 75 80

Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys  
85 90 95

Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val  
100 105 110

Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile  
115 120 125

Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro  
130 135 140

Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Arg Thr Asp  
145 150 155 160

Thr Leu

<210> 72  
<211> 430  
<212> PRT  
<213> Mus musculus

<400> 72

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser  
1 5 10 15

Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
20 25 30

Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
35 40 45

Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
50 55 60

Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val  
65 70 75 80

Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys  
85 90 95

Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val  
100 105 110

Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile  
115 120 125

Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro  
130 135 140

Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Pro Glu Thr  
145 150 155 160

Phe Glu Gln Leu Phe Thr Lys His Ala Glu Ser Val Ile Phe Gly Pro  
165 170 175

Leu Leu Leu Glu Pro Glu Pro Ile Ser Glu Glu Ile Ser Val Asp Thr  
180 185 190

Ala Trp Lys Asn Lys Asp Glu Met Val Pro Ala Ala Met Val Ser Leu  
195 200 205

Leu Leu Thr Thr Pro Asp Pro Glu Ser Ser Ser Ile Cys Ile Ser Asp  
210 215 220

Gln Cys Asn Ser Ala Asn Phe Ser Gly Ser Gln Ser Thr Gln Val Thr  
225 230 235 240

C3

Cys Glu Asp Glu Cys Gln Arg Gln Pro Ser Val Lys Tyr Ala Thr Leu  
245 250 255

Val Ser Asn Asp Lys Leu Val Glu Thr Asp Glu Glu Gln Gly Phe Ile  
260 265 270

His Ser Pro Val Ser Asn Cys Ile Ser Ser Asn His Ser Pro Leu Arg  
275 280 285

Gln Ser Phe Ser Ser Ser Ser Trp Glu Thr Glu Ala Gln Thr Phe Phe  
290 295 300

Leu Leu Ser Asp Gln Gln Pro Thr Met Ile Ser Pro Gln Leu Ser Phe  
305 310 315 320

Ser Gly Leu Asp Glu Leu Leu Glu Leu Glu Gly Ser Phe Pro Glu Glu  
325 330 335

Asn His Arg Glu Lys Ser Val Cys Tyr Leu Gly Val Thr Ser Val Asn  
340 345 350

Arg Arg Glu Ser Gly Val Leu Leu Thr Gly Glu Ala Gly Ile Leu Cys  
355 360 365

Thr Phe Pro Ala Gln Cys Leu Phe Ser Asp Ile Arg Ile Leu Gln Glu  
370 375 380

Arg Cys Ser His Phe Val Glu Asn Asn Leu Ser Leu Gly Thr Ser Gly  
385 390 395 400

Glu Asn Phe Val Pro Tyr Met Pro Gln Phe Gln Thr Cys Ser Thr His  
405 410 415

Ser His Lys Ile Met Glu Asn Lys Met Cys Asp Leu Thr Val  
420 425 430

<210> 73

<211> 160

<212> PRT

<213> Mus musculus

<400> 73

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser  
1 5 10 15

Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
20 25 30

Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
35 40 45

Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
50 55 60

Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val  
65 70 75 80

Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys  
85 90 95

Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val  
100 105 110

Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile  
115 120 125

Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro  
130 135 140

Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Val Thr Val  
145 150 155 160

<210> 74  
<211> 168  
<212> PRT  
<213> Mus musculus

<400> 74

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser  
1 5 10 15

Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
20 25 30

Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
35 40 45

Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
50 55 60

Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val  
65 70 75 80

Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys  
85 90 95

Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val  
100 105 110

Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile  
115 120 125

Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro  
130 135 140

Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys Asp Ile Ser  
145 150 155 160

Leu His Glu Val Phe Ile Phe Arg  
165

<210> 75  
<211> 142  
<212> PRT  
<213> Mus musculus

<400> 75

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

C3

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Gly Met Cys Thr Val Leu Phe Met Asp  
130 135 140

<210> 76  
<211> 142  
<212> PRT  
<213> Mus musculus

<400> 76

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Gly Met Cys Thr Val Leu Phe Met Asp  
130 135 140

<210> 77  
<211> 142  
<212> PRT  
<213> Mus musculus

<400> 77

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
85 90 95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Gly Met Cys Thr Val Leu Phe Met Asp  
130 135 140

<210> 78  
<211> 142  
<212> PRT  
<213> Mus musculus

<400> 78

Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
1 5 10 15

Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
20 25 30

Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
35 40 45

Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
50 55 60

Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
65 70 75 80

Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser



85

90

95

Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
100 105 110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

Lys Phe Tyr Ile His Gly Met Cys Thr Val Leu Phe Met Asp  
130 135 140

<210> 79

<211> 73

<212> PRT

<213> Mus musculus

<400> 79

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser  
1 5 10 15

Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
20 25 30

Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
35 40 45

Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
50 55 60

Gly Met Cys Thr Val Leu Phe Met Asp  
65 70

<210> 80

<211> 889

<212> PRT

<213> Mus musculus

<400> 80

Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
1 5 10 15

Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
20 25 30

Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
35 40 45

C3

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
65 70 75 80

Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
85 90 95

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
195 200 205

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
245 250 255

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
260 265 270

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
275 280 285

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val

C3

290

295

300

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
305 310 315 320

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
325 330 335

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
340 345 350

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
355 360 365

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
370 375 380

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
385 390 395 400

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
405 410 415

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
420 425 430

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
435 440 445

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
450 455 460

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
465 470 475 480

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
485 490 495

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

C3

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
580 585 590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
610 615 620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
690 695 700

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

C3

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile  
785 790 795 800

Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly  
805 810 815

Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp  
820 825 830

Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile  
835 840 845

Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg  
850 855 860

Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser  
865 870 875 880

Trp Ala Gln Gly Leu Asn Phe Gln Lys  
885

<210> 81  
<211> 867  
<212> PRT  
<213> Mus musculus

<400> 81

Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys Phe Lys Leu Phe Cys Gly  
1 5 10 15

Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu Ser Pro Ala Gly Ala Pro  
20 25 30

Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser Glu Ala Ile Val Glu Ala  
35 40 45

Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro Glu Leu Ser Lys Thr Val  
50 55 60

Phe His Cys Cys Phe Gly Asn Glu Gln Gly Gln Asn Cys Ser Ala Leu  
65 70 75 80

Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala Ser Val Val Lys Ala Ser  
85 90 95

Val Phe Arg Gln Leu Gly Val Asn Trp Asp Ile Glu Cys Trp Met Lys

C3

100

105

110

Gly Asp Leu Thr Leu Phe Ile Cys His Met Glu Pro Leu Pro Lys Asn  
115 120 125

Pro Phe Lys Asn Tyr Asp Ser Lys Val His Leu Leu Tyr Asp Leu Pro  
130 135 140

Glu Val Ile Asp Asp Ser Pro Leu Pro Pro Leu Lys Asp Ser Phe Gln  
145 150 155 160

Thr Val Gln Cys Asn Cys Ser Leu Arg Gly Cys Glu Cys His Val Pro  
165 170 175

Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu Leu Met Tyr Leu Glu Ile  
180 185 190

Thr Ser Ala Gly Val Ser Phe Gln Ser Pro Leu Met Ser Leu Gln Pro  
195 200 205

Met Leu Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met Glu Val  
210 215 220

Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp Asp Ser Gln Thr Met Ala  
225 230 235 240

Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr Leu Glu Asn Ser Thr Ile  
245 250 255

Val Arg Glu Ala Ala Glu Ile Val Ser Ala Thr Ser Leu Leu Val Asp  
260 265 270

Ser Val Leu Pro Gly Ser Ser Tyr Glu Val Gln Val Arg Ser Lys Arg  
275 280 285

Leu Asp Gly Ser Gly Val Trp Ser Asp Trp Ser Ser Pro Gln Val Phe  
290 295 300

Thr Thr Gln Asp Val Val Tyr Phe Pro Pro Lys Ile Leu Thr Ser Val  
305 310 315 320

Gly Ser Asn Ala Ser Phe His Cys Ile Tyr Lys Asn Glu Asn Gln Ile  
325 330 335

Ile Ser Ser Lys Gln Ile Val Trp Trp Arg Asn Leu Ala Glu Lys Ile  
340 345 350

C3

Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp Arg Val Ser Lys Val Thr  
355 360 365

Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg Gly Lys Phe Thr Tyr Asp  
370 375 380

Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys His His Arg Tyr Ala Glu  
385 390 395 400

Leu Tyr Val Ile Asp Val Asn Ile Asn Ile Ser Cys Glu Thr Asp Gly  
405 410 415

Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser Pro Ser Thr Ile Gln Ser  
420 425 430

Leu Val Gly Ser Thr Val Gln Leu Arg Tyr His Arg Arg Ser Leu Tyr  
435 440 445

Cys Pro Asp Ser Pro Ser Ile His Pro Thr Ser Glu Pro Lys Asn Cys  
450 455 460

Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys Val Phe Gln Pro Ile Phe  
465 470 475 480

Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg Ile Asn His Ser Leu Gly  
485 490 495

Ser Leu Asp Ser Pro Pro Thr Cys Val Leu Pro Asp Ser Val Val Lys  
500 505 510

Pro Leu Pro Pro Ser Asn Val Lys Ala Glu Ile Thr Val Asn Thr Gly  
515 520 525

Leu Leu Lys Val Ser Trp Glu Lys Pro Val Phe Pro Glu Asn Asn Leu  
530 535 540

Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly Lys Glu Ile Gln Trp Lys  
545 550 555 560

Thr His Glu Val Phe Asp Ala Lys Ser Lys Ser Ala Ser Leu Leu Val  
565 570 575

Ser Asp Leu Cys Ala Val Tyr Val Val Gln Val Arg Cys Arg Arg Leu  
580 585 590

C3

Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser Ser Pro Ala Tyr Thr Leu  
595 600 605

Val Met Asp Val Lys Val Pro Met Arg Gly Pro Glu Phe Trp Arg Lys  
610 615 620

Met Asp Gly Asp Val Thr Lys Lys Glu Arg Asn Val Thr Leu Leu Trp  
625 630 635 640

Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val  
645 650 655

Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly  
660 665 670

Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val  
675 680 685

Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn  
690 695 700

Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu  
705 710 715 720

Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu  
725 730 735

Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile  
740 745 750

Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val  
755 760 765

Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln  
770 775 780

Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro Lys Ile  
785 790 795 800

Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala  
805 810 815

Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val Leu Leu  
820 825 830

C3



Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu Phe Trp  
835 840 845

Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn  
850 855 860

Phe Gln Lys  
865

<210> 82  
<211> 862  
<212> PRT  
<213> Mus musculus

<400> 82

Ile Ser Pro Trp Lys Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr  
1 5 10 15

Asp Asp Ser Phe Leu Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala  
20 25 30

Leu Lys Gly Ala Ser Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser  
35 40 45

Gly Ile Tyr Val Pro Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe  
50 55 60

Gly Asn Glu Gln Gly Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu  
65 70 75 80

Gly Lys Thr Leu Ala Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu  
85 90 95

Gly Val Asn Trp Asp Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu  
100 105 110

Phe Ile Cys His Met Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr  
115 120 125

Asp Ser Lys Val His Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp  
130 135 140

Ser Pro Leu Pro Pro Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn  
145 150 155 160

Cys Ser Leu Arg Gly Cys Glu Cys His Val Pro Val Pro Arg Ala Lys  
165 170 175

Leu Asn Tyr Ala Leu Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val  
180 185 190

Ser Phe Gln Ser Pro Leu Met Ser Leu Gln Pro Met Leu Val Val Lys  
195 200 205

Pro Asp Pro Pro Leu Gly Leu His Met Glu Val Thr Asp Asp Gly Asn  
210 215 220

Leu Lys Ile Ser Trp Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln  
225 230 235 240

Tyr Gln Val Lys Tyr Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala  
245 250 255

Glu Ile Val Ser Ala Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly  
260 265 270

Ser Ser Tyr Glu Val Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly  
275 280 285

Val Trp Ser Asp Trp Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val  
290 295 300

Val Tyr Phe Pro Pro Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser  
305 310 315 320

Phe His Cys Ile Tyr Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln  
325 330 335

Ile Val Trp Trp Arg Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr  
340 345 350

Ser Ile Val Ser Asp Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys  
355 360 365

Ala Thr Arg Pro Arg Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys  
370 375 380

Asn Glu Gln Ala Cys His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp  
385 390 395 400

Val Asn Ile Asn Ile Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met  
405 410 415

C3

Thr Cys Arg Trp Ser Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr  
420 425 430

Val Gln Leu Arg Tyr His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro  
435 440 445

Ser Ile His Pro Thr Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp  
450 455 460

Gly Phe Tyr Glu Cys Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr  
465 470 475 480

Thr Met Trp Ile Arg Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro  
485 490 495

Pro Thr Cys Val Leu Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser  
500 505 510

Asn Val Lys Ala Glu Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser  
515 520 525

Trp Glu Lys Pro Val Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg  
530 535 540

Tyr Gly Leu Ser Gly Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe  
545 550 555 560

Asp Ala Lys Ser Lys Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala  
565 570 575

Val Tyr Val Val Gln Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr  
580 585 590

Trp Ser Asn Trp Ser Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys  
595 600 605

Val Pro Met Arg Gly Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val  
610 615 620

Thr Lys Lys Glu Arg Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys  
625 630 635 640

Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val Lys His Arg Thr  
645 650 655

C3

Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu  
660 665 670

Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr Val Leu Ala Val  
675 680 685

Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp  
690 695 700

Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu  
705 710 715 720

Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr  
725 730 735

Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp  
740 745 750

Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile  
755 760 765

His Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro  
770 775 780

Val Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr  
785 790 795 800

Lys Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile  
805 810 815

Val Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu  
820 825 830

Ile Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn  
835 840 845

Pro Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys  
850 855 860

<210> 83  
<211> 757  
<212> PRT  
<213> Mus musculus

<400> 83

Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met Glu Pro Leu Pro  
1 5 10 15

C3

Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His Leu Leu Tyr Asp  
20 25 30

Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro Leu Lys Asp Ser  
35 40 45

Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly Cys Glu Cys His  
50 55 60

Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu Leu Met Tyr Leu  
65 70 75 80

Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro Leu Met Ser Leu  
85 90 95

Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met  
100 105 110

Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp Asp Ser Gln Thr  
115 120 125

Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr Leu Glu Asn Ser  
130 135 140

Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala Thr Ser Leu Leu  
145 150 155 160

Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val Gln Val Arg Ser  
165 170 175

Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp Ser Ser Pro Gln  
180 185 190

Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro Lys Ile Leu Thr  
195 200 205

Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr Lys Asn Glu Asn  
210 215 220

Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg Asn Leu Ala Glu  
225 230 235 240

Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp Arg Val Ser Lys  
245 250 255

C3

Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg Gly Lys Phe Thr  
260 265 270

Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys His His Arg Tyr  
275 280 285

Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile Ser Cys Glu Thr  
290 295 300

Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser Pro Ser Thr Ile  
305 310 315 320

Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr His Arg Arg Ser  
325 330 335

Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr Ser Glu Pro Lys  
340 345 350

Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys Val Phe Gln Pro  
355 360 365

Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg Ile Asn His Ser  
370 375 380

Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu Pro Asp Ser Val  
385 390 395 400

Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu Ile Thr Val Asn  
405 410 415

Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val Phe Pro Glu Asn  
420 425 430

Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly Lys Glu Ile Gln  
435 440 445

Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys Ser Ala Ser Leu  
450 455 460

Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln Val Arg Cys Arg  
465 470 475 480

Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser Ser Pro Ala Tyr  
485 490 495

C3

Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly Pro Glu Phe Trp  
500 505 510

Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg Asn Val Thr Leu  
515 520 525

Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg  
530 535 540

Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp  
545 550 555 560

Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His  
565 570 575

Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn  
580 585 590

Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu  
595 600 605

Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp  
610 615 620

Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp  
625 630 635 640

Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser  
645 650 655

Asn Val Lys Lys Phe Tyr Ile His Asp Asn Phe Ile Pro Ile Glu Lys  
660 665 670

Tyr Gln Phe Ser Leu Tyr Pro Val Phe Met Glu Gly Val Gly Lys Pro  
675 680 685

Lys Ile Ile Asn Gly Phe Thr Lys Asp Ala Ile Asp Lys Gln Gln Asn  
690 695 700

Asp Ala Gly Leu Tyr Val Ile Val Pro Ile Ile Ile Ser Ser Cys Val  
705 710 715 720

Leu Leu Leu Gly Thr Leu Leu Ile Ser His Gln Arg Met Lys Lys Leu  
725 730 735

Phe Trp Asp Asp Val Pro Asn Pro Lys Asn Cys Ser Trp Ala Gln Gly

C3

740

745

750

Leu Asn Phe Gln Lys  
755

<210> 84  
<211> 157  
<212> PRT  
<213> Mus musculus

<400> 84

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser  
1 5 10 15

Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
20 25 30

Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
35 40 45

Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
50 55 60

Asp Asn Phe Ile Pro Ile Glu Lys Tyr Gln Phe Ser Leu Tyr Pro Val  
65 70 75 80

Phe Met Glu Gly Val Gly Lys Pro Lys Ile Ile Asn Gly Phe Thr Lys  
85 90 95

Asp Ala Ile Asp Lys Gln Gln Asn Asp Ala Gly Leu Tyr Val Ile Val  
100 105 110

Pro Ile Ile Ile Ser Ser Cys Val Leu Leu Leu Gly Thr Leu Leu Ile  
115 120 125

Ser His Gln Arg Met Lys Lys Leu Phe Trp Asp Asp Val Pro Asn Pro  
130 135 140

Lys Asn Cys Ser Trp Ala Gln Gly Leu Asn Phe Gln Lys  
145 150 155

<210> 85  
<211> 796  
<212> PRT  
<213> Mus musculus

<400> 85

C3



Met Met Cys Gln Lys Phe Tyr Val Val Leu Leu His Trp Glu Phe Leu  
1 5 10 15

Tyr Val Ile Ala Ala Leu Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys  
20 25 30

Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu  
35 40 45

Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser  
50 55 60

Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro  
65 70 75 80

Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe Gly Asn Glu Gln Gly  
85 90 95

Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala  
100 105 110

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
115 120 125

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
130 135 140

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
145 150 155 160

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
165 170 175

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
180 185 190

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
195 200 205

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
210 215 220

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
225 230 235 240

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp

C3



Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
500 505 510

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
515 520 525

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
530 535 540

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
545 550 555 560

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
565 570 575

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
580 585 590

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
595 600 605

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
610 615 620

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
625 630 635 640

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
645 650 655

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
660 665 670

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
675 680 685

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
690 695 700

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
705 710 715 720

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
725 730 735

C3

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
740 745 750

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
755 760 765

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
770 775 780

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
785 790 795

<210> 86  
<211> 774  
<212> PRT  
<213> Mus musculus

<400> 86

Asn Leu Ala Tyr Pro Ile Ser Pro Trp Lys Phe Lys Leu Phe Cys Gly  
1 5 10 15

Pro Pro Asn Thr Thr Asp Asp Ser Phe Leu Ser Pro Ala Gly Ala Pro  
20 25 30

Asn Asn Ala Ser Ala Leu Lys Gly Ala Ser Glu Ala Ile Val Glu Ala  
35 40 45

Lys Phe Asn Ser Ser Gly Ile Tyr Val Pro Glu Leu Ser Lys Thr Val  
50 55 60

Phe His Cys Cys Phe Gly Asn Glu Gln Gly Gln Asn Cys Ser Ala Leu  
65 70 75 80

Thr Asp Asn Thr Glu Gly Lys Thr Leu Ala Ser Val Val Lys Ala Ser  
85 90 95

Val Phe Arg Gln Leu Gly Val Asn Trp Asp Ile Glu Cys Trp Met Lys  
100 105 110

Gly Asp Leu Thr Leu Phe Ile Cys His Met Glu Pro Leu Pro Lys Asn  
115 120 125

Pro Phe Lys Asn Tyr Asp Ser Lys Val His Leu Leu Tyr Asp Leu Pro  
130 135 140

Glu Val Ile Asp Asp Ser Pro Leu Pro Pro Leu Lys Asp Ser Phe Gln

C3

145                      150                      155                      160  
 Thr Val Gln Cys Asn Cys Ser Leu Arg Gly Cys Glu Cys His Val Pro  
                                  165                                   170                                   175  
 Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu Leu Met Tyr Leu Glu Ile  
                                  180                                   185                                   190  
 Thr Ser Ala Gly Val Ser Phe Gln Ser Pro Leu Met Ser Leu Gln Pro  
                                  195                                   200                                   205  
 Met Leu Val Val Lys Pro Asp Pro Pro Leu Gly Leu His Met Glu Val  
                                  210                                   215                                   220  
 Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp Asp Ser Gln Thr Met Ala  
                                  225                                   230                                   235                                   240  
 Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr Leu Glu Asn Ser Thr Ile  
                                  245                                   250                                   255  
 Val Arg Glu Ala Ala Glu Ile Val Ser Ala Thr Ser Leu Leu Val Asp  
                                  260                                   265                                   270  
 Ser Val Leu Pro Gly Ser Ser Tyr Glu Val Gln Val Arg Ser Lys Arg  
                                  275                                   280                                   285  
 Leu Asp Gly Ser Gly Val Trp Ser Asp Trp Ser Ser Pro Gln Val Phe  
                                  290                                   295                                   300  
 Thr Thr Gln Asp Val Val Tyr Phe Pro Pro Lys Ile Leu Thr Ser Val  
                                  305                                   310                                   315                                   320  
 Gly Ser Asn Ala Ser Phe His Cys Ile Tyr Lys Asn Glu Asn Gln Ile  
                                  325                                   330                                   335  
 Ile Ser Ser Lys Gln Ile Val Trp Trp Arg Asn Leu Ala Glu Lys Ile  
                                  340                                   345                                   350  
 Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp Arg Val Ser Lys Val Thr  
                                  355                                   360                                   365  
 Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg Gly Lys Phe Thr Tyr Asp  
                                  370                                   375                                   380  
 Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys His His Arg Tyr Ala Glu  
                                  385                                   390                                   395                                   400

C3

Leu Tyr Val Ile Asp Val Asn Ile Asn Ile Ser Cys Glu Thr Asp Gly  
405 410 415

Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser Pro Ser Thr Ile Gln Ser  
420 425 430

Leu Val Gly Ser Thr Val Gln Leu Arg Tyr His Arg Arg Ser Leu Tyr  
435 440 445

Cys Pro Asp Ser Pro Ser Ile His Pro Thr Ser Glu Pro Lys Asn Cys  
450 455 460

Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys Val Phe Gln Pro Ile Phe  
465 470 475 480

Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg Ile Asn His Ser Leu Gly  
485 490 495

Ser Leu Asp Ser Pro Pro Thr Cys Val Leu Pro Asp Ser Val Val Lys  
500 505 510

Pro Leu Pro Pro Ser Asn Val Lys Ala Glu Ile Thr Val Asn Thr Gly  
515 520 525

Leu Leu Lys Val Ser Trp Glu Lys Pro Val Phe Pro Glu Asn Asn Leu  
530 535 540

Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly Lys Glu Ile Gln Trp Lys  
545 550 555 560

Thr His Glu Val Phe Asp Ala Lys Ser Lys Ser Ala Ser Leu Leu Val  
565 570 575

Ser Asp Leu Cys Ala Val Tyr Val Val Gln Val Arg Cys Arg Arg Leu  
580 585 590

Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser Ser Pro Ala Tyr Thr Leu  
595 600 605

Val Met Asp Val Lys Val Pro Met Arg Gly Pro Glu Phe Trp Arg Lys  
610 615 620

Met Asp Gly Asp Val Thr Lys Lys Glu Arg Asn Val Thr Leu Leu Trp  
625 630 635 640

C3

Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val  
645 650 655

Val Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly  
660 665 670

Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val  
675 680 685

Thr Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn  
690 695 700

Leu Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu  
705 710 715 720

Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu  
725 730 735

Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile  
740 745 750

Leu Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val  
755 760 765

C3  
Lys Lys Phe Tyr Ile His  
770

<210> 87  
<211> 769  
<212> PRT  
<213> Mus musculus

<400> 87

Ile Ser Pro Trp Lys Phe Lys Leu Phe Cys Gly Pro Pro Asn Thr Thr  
1 5 10 15

Asp Asp Ser Phe Leu Ser Pro Ala Gly Ala Pro Asn Asn Ala Ser Ala  
20 25 30

Leu Lys Gly Ala Ser Glu Ala Ile Val Glu Ala Lys Phe Asn Ser Ser  
35 40 45

Gly Ile Tyr Val Pro Glu Leu Ser Lys Thr Val Phe His Cys Cys Phe  
50 55 60

Gly Asn Glu Gln Gly Gln Asn Cys Ser Ala Leu Thr Asp Asn Thr Glu





Phe His Cys Ile Tyr Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln  
325 330 335

Ile Val Trp Trp Arg Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr  
340 345 350

Ser Ile Val Ser Asp Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys  
355 360 365

Ala Thr Arg Pro Arg Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys  
370 375 380

Asn Glu Gln Ala Cys His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp  
385 390 395 400

Val Asn Ile Asn Ile Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met  
405 410 415

Thr Cys Arg Trp Ser Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr  
420 425 430

Val Gln Leu Arg Tyr His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro  
435 440 445

Ser Ile His Pro Thr Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp  
450 455 460

Gly Phe Tyr Glu Cys Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr  
465 470 475 480

Thr Met Trp Ile Arg Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro  
485 490 495

Pro Thr Cys Val Leu Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser  
500 505 510

Asn Val Lys Ala Glu Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser  
515 520 525

Trp Glu Lys Pro Val Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg  
530 535 540

Tyr Gly Leu Ser Gly Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe  
545 550 555 560

C3

Asp Ala Lys Ser Lys Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala  
565 570 575

Val Tyr Val Val Gln Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr  
580 585 590

Trp Ser Asn Trp Ser Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys  
595 600 605

Val Pro Met Arg Gly Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val  
610 615 620

Thr Lys Lys Glu Arg Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys  
625 630 635 640

Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val Lys His Arg Thr  
645 650 655

Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu  
660 665 670

Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr Val Leu Ala Val  
675 680 685

Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp  
690 695 700

Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu  
705 710 715 720

Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr  
725 730 735

Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp  
740 745 750

Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile  
755 760 765

His

<210> 88  
<211> 684  
<212> PRT  
<213> Mus musculus

<400> 88

Ser Val Val Lys Ala Ser Val Phe Arg Gln Leu Gly Val Asn Trp Asp  
1 5 10 15

Ile Glu Cys Trp Met Lys Gly Asp Leu Thr Leu Phe Ile Cys His Met  
20 25 30

Glu Pro Leu Pro Lys Asn Pro Phe Lys Asn Tyr Asp Ser Lys Val His  
35 40 45

Leu Leu Tyr Asp Leu Pro Glu Val Ile Asp Asp Ser Pro Leu Pro Pro  
50 55 60

Leu Lys Asp Ser Phe Gln Thr Val Gln Cys Asn Cys Ser Leu Arg Gly  
65 70 75 80

Cys Glu Cys His Val Pro Val Pro Arg Ala Lys Leu Asn Tyr Ala Leu  
85 90 95

Leu Met Tyr Leu Glu Ile Thr Ser Ala Gly Val Ser Phe Gln Ser Pro  
100 105 110

Leu Met Ser Leu Gln Pro Met Leu Val Val Lys Pro Asp Pro Pro Leu  
115 120 125

Gly Leu His Met Glu Val Thr Asp Asp Gly Asn Leu Lys Ile Ser Trp  
130 135 140

Asp Ser Gln Thr Met Ala Pro Phe Pro Leu Gln Tyr Gln Val Lys Tyr  
145 150 155 160

Leu Glu Asn Ser Thr Ile Val Arg Glu Ala Ala Glu Ile Val Ser Ala  
165 170 175

Thr Ser Leu Leu Val Asp Ser Val Leu Pro Gly Ser Ser Tyr Glu Val  
180 185 190

Gln Val Arg Ser Lys Arg Leu Asp Gly Ser Gly Val Trp Ser Asp Trp  
195 200 205

Ser Ser Pro Gln Val Phe Thr Thr Gln Asp Val Val Tyr Phe Pro Pro  
210 215 220

Lys Ile Leu Thr Ser Val Gly Ser Asn Ala Ser Phe His Cys Ile Tyr  
225 230 235 240

C3

Lys Asn Glu Asn Gln Ile Ile Ser Ser Lys Gln Ile Val Trp Trp Arg  
245 250 255

Asn Leu Ala Glu Lys Ile Pro Glu Ile Gln Tyr Ser Ile Val Ser Asp  
260 265 270

Arg Val Ser Lys Val Thr Phe Ser Asn Leu Lys Ala Thr Arg Pro Arg  
275 280 285

Gly Lys Phe Thr Tyr Asp Ala Val Tyr Cys Cys Asn Glu Gln Ala Cys  
290 295 300

His His Arg Tyr Ala Glu Leu Tyr Val Ile Asp Val Asn Ile Asn Ile  
305 310 315 320

Ser Cys Glu Thr Asp Gly Tyr Leu Thr Lys Met Thr Cys Arg Trp Ser  
325 330 335

Pro Ser Thr Ile Gln Ser Leu Val Gly Ser Thr Val Gln Leu Arg Tyr  
340 345 350

His Arg Arg Ser Leu Tyr Cys Pro Asp Ser Pro Ser Ile His Pro Thr  
355 360 365

Ser Glu Pro Lys Asn Cys Val Leu Gln Arg Asp Gly Phe Tyr Glu Cys  
370 375 380

Val Phe Gln Pro Ile Phe Leu Leu Ser Gly Tyr Thr Met Trp Ile Arg  
385 390 395 400

Ile Asn His Ser Leu Gly Ser Leu Asp Ser Pro Pro Thr Cys Val Leu  
405 410 415

Pro Asp Ser Val Val Lys Pro Leu Pro Pro Ser Asn Val Lys Ala Glu  
420 425 430

Ile Thr Val Asn Thr Gly Leu Leu Lys Val Ser Trp Glu Lys Pro Val  
435 440 445

Phe Pro Glu Asn Asn Leu Gln Phe Gln Ile Arg Tyr Gly Leu Ser Gly  
450 455 460

Lys Glu Ile Gln Trp Lys Thr His Glu Val Phe Asp Ala Lys Ser Lys  
465 470 475 480

C3

Ser Ala Ser Leu Leu Val Ser Asp Leu Cys Ala Val Tyr Val Val Gln  
 485 490 495

Val Arg Cys Arg Arg Leu Asp Gly Leu Gly Tyr Trp Ser Asn Trp Ser  
 500 505 510

Ser Pro Ala Tyr Thr Leu Val Met Asp Val Lys Val Pro Met Arg Gly  
 515 520 525

Pro Glu Phe Trp Arg Lys Met Asp Gly Asp Val Thr Lys Lys Glu Arg  
 530 535 540

Asn Val Thr Leu Leu Trp Lys Pro Leu Thr Lys Asn Asp Ser Leu Cys  
 545 550 555 560

Ser Val Arg Arg Tyr Val Val Lys His Arg Thr Ala His Asn Gly Thr  
 565 570 575

Trp Ser Glu Asp Val Gly Asn Arg Thr Asn Leu Thr Phe Leu Trp Thr  
 580 585 590

Glu Pro Ala His Thr Val Thr Val Leu Ala Val Asn Ser Leu Gly Ala  
 595 600 605

Ser Leu Val Asn Phe Asn Leu Thr Phe Ser Trp Pro Met Ser Lys Val  
 610 615 620

Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser Ser Ser Cys Val  
 625 630 635 640

Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser Leu Leu Tyr Leu  
 645 650 655

Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly Met Lys Trp Leu  
 660 665 670

Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
 675 680

<210> 89  
 <211> 64  
 <212> PRT  
 <213> Mus musculus

<400> 89

Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser Ala Tyr Pro Leu Ser

C3

1                      5                      10                      15  
 Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser Pro Asp Asp Tyr Ser  
                     20                      25                      30  
 Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu Asn Glu Asp Asp Gly  
                     35                      40                      45  
 Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys Lys Phe Tyr Ile His  
                     50                      55                      60  
  
 <210> 90  
 <211> 9  
 <212> PRT  
 <213> Mus musculus  
  
 <400> 90  
  
 Gly Met Cys Thr Val Leu Phe Met Asp  
 1                      5  
  
 <210> 91  
 <211> 142  
 <212> PRT  
 <213> Mus musculus  
  
 <400> 91  
  
 C3 Pro Leu Thr Lys Asn Asp Ser Leu Cys Ser Val Arg Arg Tyr Val Val  
                     1                      5                      10                      15  
  
 Lys His Arg Thr Ala His Asn Gly Thr Trp Ser Glu Asp Val Gly Asn  
                     20                      25                      30  
  
 Arg Thr Asn Leu Thr Phe Leu Trp Thr Glu Pro Ala His Thr Val Thr  
                     35                      40                      45  
  
 Val Leu Ala Val Asn Ser Leu Gly Ala Ser Leu Val Asn Phe Asn Leu  
                     50                      55                      60  
  
 Thr Phe Ser Trp Pro Met Ser Lys Val Ser Ala Val Glu Ser Leu Ser  
                     65                      70                      75                      80  
  
 Ala Tyr Pro Leu Ser Ser Ser Cys Val Ile Leu Ser Trp Thr Leu Ser  
                     85                      90                      95  
  
 Pro Asp Asp Tyr Ser Leu Leu Tyr Leu Val Ile Glu Trp Lys Ile Leu  
                     100                      105                      110

Asn Glu Asp Asp Gly Met Lys Trp Leu Arg Ile Pro Ser Asn Val Lys  
115 120 125

C3

Lys Phe Tyr Ile His Gly Met Cys Thr Val Leu Phe Met Asp  
130 135 140

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